

1.0 Reference and Address			
Report Number	220100571SHA-001	Original Issued: 10-Jan-2022	Revised: None
Standard(s)	ENERGY STAR® Program Requirements for Displays Version 8.0		
Applicant	PROMETHEAN LIMITED	Manufacturer 1	PROMETHEAN LIMITED
Address	PROMETHEAN HOUSE, LOWER PHILIPS RD, BLACKBURN, LANCASHIRE, BB15TH	Address	PROMETHEAN HOUSE, LOWER PHILIPS RD, BLACKBURN, LANCASHIRE, BB15TH
Country	UNITED KINGDOM	Country	UNITED KINGDOM
Contact	John Harrison	Contact	John Harrison
Phone	+44 1254 290630	Phone	+44 1254 290630
FAX	+44 1254 290890	FAX	+44 1254 290890
Email	John.Harrison@Prometheanworld.com	Email	John.Harrison@Prometheanworld.com

2.0 Product Description				
Product	Signage Display			
Brand Name	Promethean			
Description	The product covered by this report is a Signage Display			
Models	AP9-A65			
Model Similarity	NA			
Ratings	100-240V~, 50/60Hz, 4.5A			
Other Ratings	NA			
Date Available	01/10/2022	Market Availability	Yes	OEM Yes
Major Markets	Canada,Japan,Taiwan,United States			
Trans Type	Initial Certification: Model Meets ENERGY STAR Requirements			
Notes	NA			
UPC				
Reason no UPC	No UPC Code Provided - Custom or Commercial Product			
Other reason no UPC				
Additional Model Details (Optional)	Model Name and Number	Identifying Information		
Original Certificate Actual Issued Date for Model Tested (Only Applies to Revised Reports)				NA

3.0 Product Photographs

Photo 1 - External View (front)

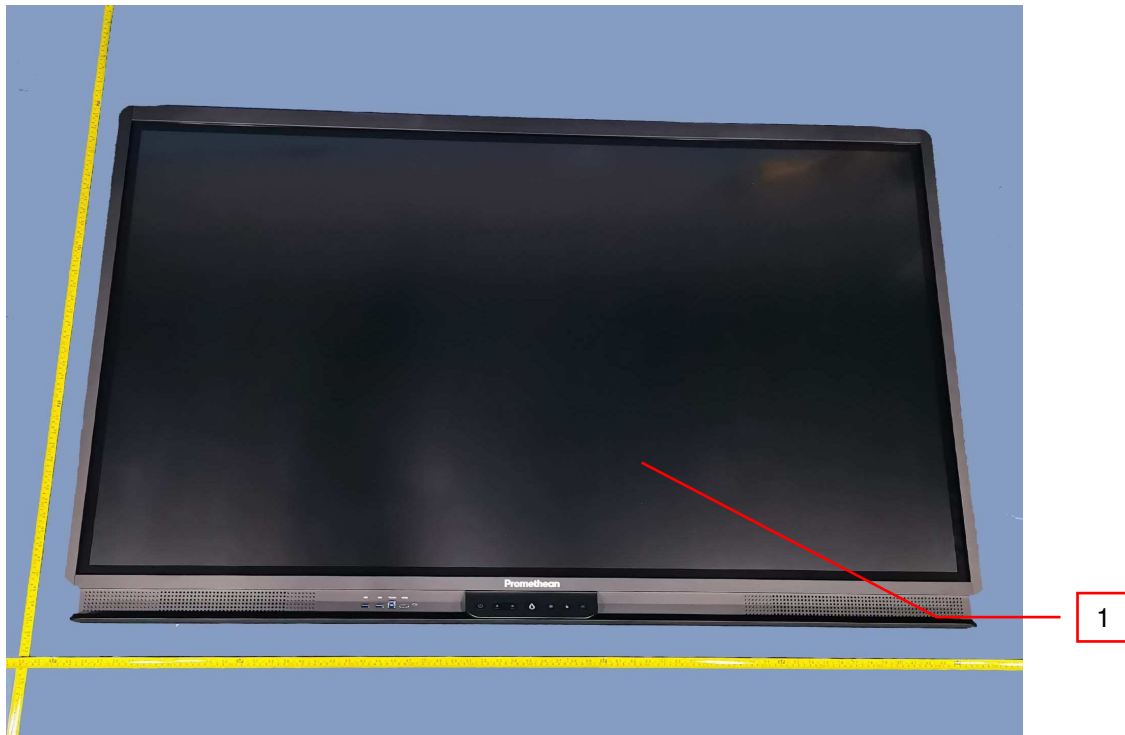


Photo 2 - External View (back)



3.0 Product Photographs

Photo 3 - Main Board

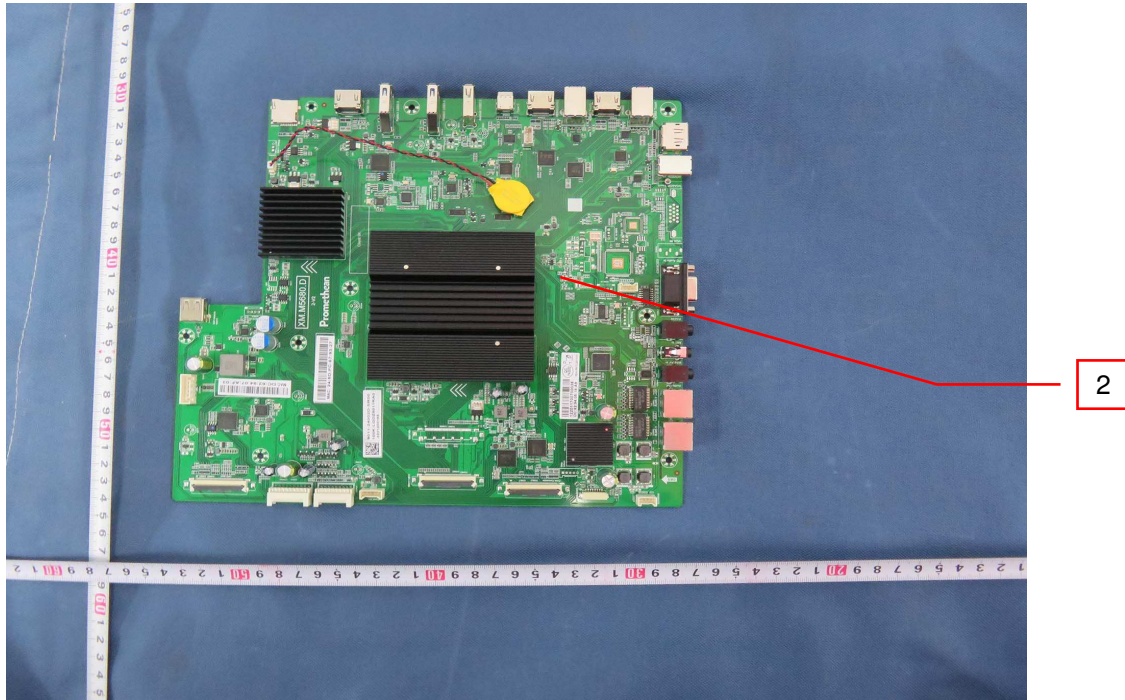
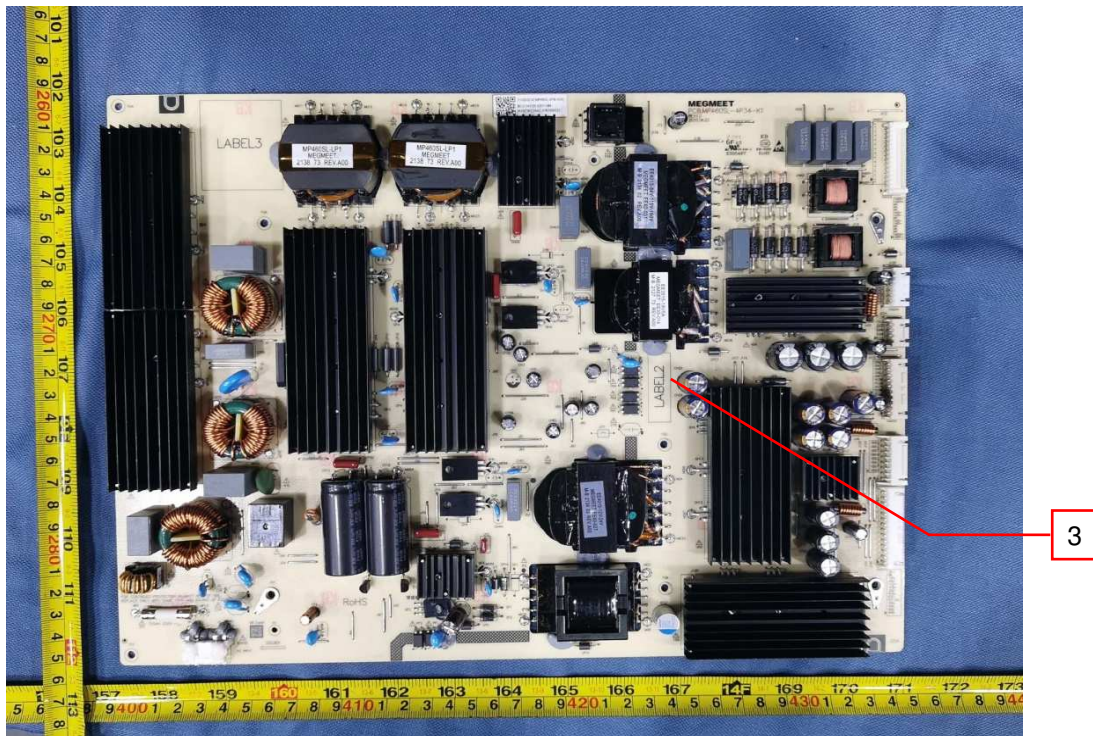


Photo 4 - Power Board



4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
1	1	LCD panel	Shenzhen KTC Commercial Display Technology CO.,LTD	K650WDG2	TFT-LCD, 64.5 inch, 3840x2160 Panel number: K650WDG20BL450B600	NR
3	2	Main Board	Guangzhou Lango Electronics Technology Co.,Ltd.	XM.M5680.D	5Vdc(Standby), 1A; 5Vdc(Normal), 5.5A; 12Vdc(Normal), 6A; 24Vdc(Normal), 2A.	NR
4	3	Power Board	Shenzhen MEGMEET Electrical Co., Ltd	MP460SL-4P34-K3X	Input: 100-240V~, 50/60Hz, 8A Max. Output: STB(+5.2Vdc,1A), V5A(+5.2Vdc,4.5A), V5B(+5.2Vdc,8.0A), V12A(+12Vdc,6.0A), V12B(+12Vdc,9.0A), V18(+18Vdc,5.0A), V24(+24Vdc,2.0A), LED(141-165Vdc, ≤0.96A) V5A+V5B ≤8A, V12A+V12B ≤9A.	NR

NOTES:

- 1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.
- 2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.
- 3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates: a) Unlisted and only visual examination is necessary or b) marks are not required to be verified.

5.0 Critical Unlisted CEC Components

Periodic Evaluation of Critical Unlisted Components by the Intertek Component Evaluation Centers (CEC) is not required under the INTERTEK ENERGY STAR Program.

6.0 Critical Features
<u>Critical Features/Components</u> - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the ENERGY STAR® Program Requirements.
<u>Listed Component</u> - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.
<u>Recognized Component</u> - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.
<u>Unlisted Component</u> - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.
<u>Construction Details</u> - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.
1. <u>Product Safety Compliance</u> - NA
2. <u>EMI Compliance</u> - NA
3. <u>Schematics</u> - NA
4. <u>Installation, Operating and Safety Instructions</u> - Instructions for installation and use of this product are provided by the manufacturer. Refer to Illustration No.1-2.for details.
5. <u>Package Markings</u> - NA
6. <u>Warranty Information</u> - NA
7. <u>Marking Label</u> - Refer to Illustration No.3.for details.

7.0 Illustrations

Illustration 1 - Installation and Safety instruction

Signage Displays with a plug-in module



As an ENERGY STAR Partner, Promethean Limited has followed the EPA's enhanced product qualification and certification process to ensure that the products marked with the ENERGY STAR logo are ENERGY STAR qualified per the applicable ENERGY STAR guidelines for energy efficiency. The logo appears on the pen tray near the front connections on all ENERGY STAR qualified Signage Displays.

The ENERGY STAR program for Signage Displays was created by EPA to promote energy efficiency and reduce air pollution through more energy-efficient equipment in offices, classrooms and factories. One way that a product can achieve this goal is by using a power management feature to reduce power consumption when the product is not in use.

For AP9-A65 and AP9-A75, sleep mode can be initiated in a couple of different ways. Users can take the action of pressing the power button on the panel for 3 seconds, or a remote command can be sent via RS232. The panel will also go into sleep mode without user action after 60 minutes of inactivity.

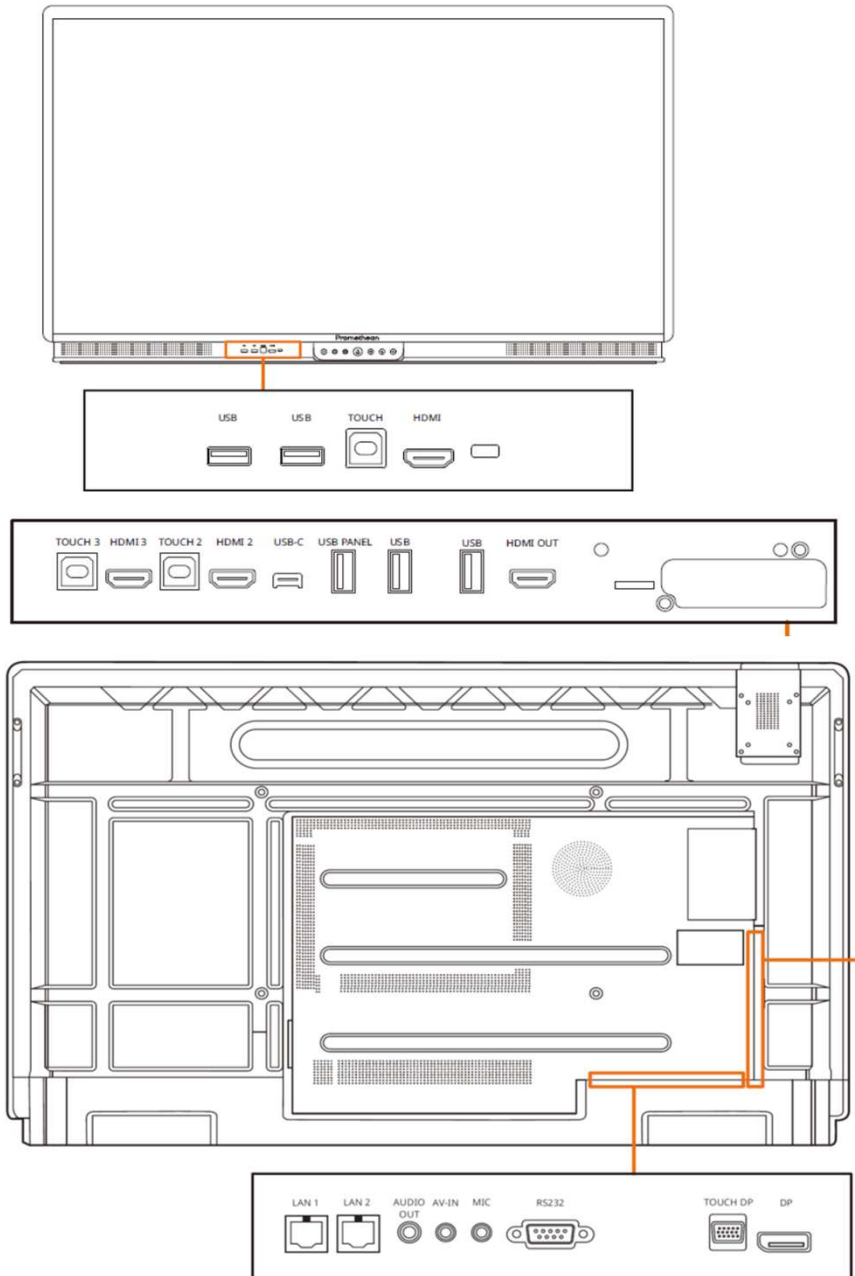
AP9-A65 and AP9-A75 can exit sleep mode by the user pressing the power button, by the proximity sensors detecting a user's presence, or through a remote command via RS232. In the event of a proximity detection, the panel will transition from sleep mode to another low power mode, STAND BY.

In the event that brightness settings or power mode settings are changed by the user, energy consumption of the panel may increase beyond the limits required for ENERGY STAR certification.

Additional information on the ENERGY STAR program and its environment benefits are available on the EPA ENERGY STAR website at <http://www.energystar.gov>

7.0 Illustrations

Illustration 2 - Installation and Safety instruction (Continued)



7.0 Illustrations

Illustration 3 - Marking Label





8.0 Test Summary			
Evaluation Period	01/07/2022-01/10/2022		Project No. 220100571SHA
Sample Rec. Date	7-Jan-2022	Condition Prototype	Sample ID. 0220107-161-004
Test Location	Intertek Testing Services Shanghai Limited. (1105997) Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China		
Test Procedure	Testing Lab	Test type	Qualification
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.			
The following requirements were evaluated:			
Required Submittal Information			Submittal Data
Model Name and/or Number tested			AP9-A65
Date tested			01/07/2022
Serial number of Unit tested			1 sample
ENERGY_STAR_Specification_Version*			8.0
Product_Type*			Signage Display
Tiled_Display_System			No
Maximum_Tiled_Configuration			
Panel_Type*			Other
Other_Panel_Type			TFT-LCD
Diagonal_Screen_Size_in*			64.5
Screen_Area_sq_in*			1779
Display_Contrast_Ratio*			1200
Native_Vertical_Resolution_lines*			2160
Native_Horizontal_Resolution_lines*			3840
Total_Native_Resolution_megapixels*			8.3
Native_Pixel_Density_Dp_pixels_sq_in*			4662
As_Testing_Screen_Refresh_Rate_Hz*			60
Maximum_Screen_Refresh_Rate_Hz*			61
Enhanced_Performance_Criteria*			No
Color_Gamut			
Reported_Contrast_Ratio_at_85_deg_Left_Horiz_Viewing_Angle			
Reported_Contrast_Ratio_at_85_deg_Right_Horiz_Viewing_Angle			
High_Dynamic_Range_HDR*			N/A
Other_Available_Interfaces			MIC, AUDIO OUT, PC AUDIO, TOUCH VGA/DP, TOUCH, HDMI OUT
Other_Features			
Signal_Interface*			DisplayPort 1.2
Other_Interface			
USB_C_with_Power_Delivery_Supported*			Yes
Maximum_Power_Delivery_W			60
Other_Power_Source			
Does_Model_Have_a_Forced_Menu_at_Initial_Start_up*			No
Maximum_Measured_Luminance_cd_m ² *			433.1
Maximum_Reported_Luminance_cd_m ² *			400
As_shipped_Luminance_cd_m ²			433
As_tested_Luminance_cd_m ² *			263.4
On_Mode_Power_at_12_Lux_at_115_Volts_W			
On_Mode_Power_at_300_Lux_at_115_Volts_W			
Measured_On_Mode_Power_at_115_Volts_W			128.33
Reported_On_Mode_Power_at_115_Volts_W			128.33
Maximum_On_Mode_Power_Limit_for_Signage_Certification_W			136.22
Measured_Sleep_Mode_Power_at_115_Volts_W			0.18
Reported_Sleep_Mode_Power_at_115_Volts_W			0.18
Measured_Disconnected_Sleep_Mode_Power_at_115_Volts_W			0.18

8.0 Test Summary	
Maximum Sleep Mode Power Limit for Signage Certification W	0.5
Number of Sleep Modes in Addition to Default Sleep Mode*	0
Other Mechanism for Automatically Entering Sleep or Off Mode	
Default Delay Time to Sleep_min	61
Measured Off Mode Power at 115 Volts W	0
Reported Off Mode Power at 115 Volts W	0
Measured Total Energy Consumption at 115 Volts kWh	
Reported Total Energy Consumption at 115 Volts kWh	
Max Total Energy Consumption Limit for Monitor kWh	
On Mode Power at 12 Lux at 230 Volts W	
On Mode Power at 300 Lux at 230 Volts W	
Measured On Mode Power at 230 Volts W	
Measured Sleep Mode Power at 230 Volts W	
Measured Disconnected Sleep Mode Power at 230 Volts W	
Measured Off Mode Power at 230 Volts W	
Measured Total Energy Consumption at 230 Volts kWh	
True Power Factor PF During On Mode Testing at 115 Volts W	0.96
True Power Factor PF During On Mode Testing at 230 Volts W	
Color Spaces Supported*	NTSC
Available Signal or Data Interfaces*	Display,HDMI,RJ45,RS232,USB,Other
Model Features*	Built-In Speakers,Bluetooth,Embedded Module (Non-removable),Touch Screen,USB-C,User Adjustable Backlight
Features Enabled in Default On Mode*	Built-In Speakers,Bluetooth
Features Enabled in Default Sleep Mode*	None
Wireless Technologies Supported*	IEEE 802.11ac, 5 GHz,IEEE 802.11n, 5 GHz,IEEE 802.11n, 2.4 GHz,IEEE 802.11g, 2.4 GHz,IEEE 802.11b, 2.4 GHz,IEEE 802.11a, 5 GHz,Other
Ethernet Supported*	Fast Ethernet (100 Mbit/s),Other
Power Source*	Ac to dc internal power supply
Mechanism for Automatically Entering Sleep or Off Mode*	Display Power Management Signaling

8.0 Test Summary	
On Mode Power at 12 Lux at 100 Volts 50Hz W	
On Mode Power at 300 Lux at 100 Volts 50Hz W	
Measured On Mode Power at 100 Volts 50Hz W	128.31
Measured Sleep Mode Power at 100 Volts 50Hz W	0.18
Measured Disconnected Sleep Mode Power at 100 Volts 50Hz W	0.18
Measured Off Mode Power at 100 Volts 50Hz W	0
Measured Total Energy Consumption at 100 Volts 50Hz kWh	
On Mode Power at 12 Lux at 100 Volts 60Hz W	
On Mode Power at 300 Lux at 100 Volts 60Hz W	
Measured On Mode Power at 100 Volts 60Hz W	128.35
Measured Sleep Mode Power at 100 Volts 60Hz W	0.18
Measured Disconnected Sleep Mode Power at 100 Volts 60Hz W	0.18
Measured Off Mode Power at 100 Volts 60Hz W	0
Measured Total Energy Consumption at 100 Volts 60Hz kWh	

8.1 Signatures
 A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.

Completed by:	Sam Li	Reviewed by:	Carl Dong
Title:	Engineer	Title:	Engineer
Signature:		Signature:	

9.0 Correlation Page For Multiple Listings

The following products, which are identical to those identified in this report except for model number and Company name.

BASIC LISTEE	PROMETHEAN LIMITED		
Address	PROMETHEAN HOUSE, LOWER PHILIPS RD, BLACKBURN, LANCASHIRE, BB15TH		
Country	UNITED KINGDOM	EPA ID	1139158
Product	Signage Display		
Contact	John Harrison		
Phone	+44 1254 290630		
FAX	+44 1254 290890		
Email	John.Harrison@Prometheanworld.com		

MULTIPLE LISTEE 1	None		
Address			
Country		EPA ID	
Contact			
Phone			
FAX			
Email			
Brand Name			
Date Available		Market Availability	OEM
Major Markets			
Trans Type			
Notes			
UPC			
Reason no UPC			
Other reason no UPC			
ASSOCIATED MANUFACTURER			
Address			
Country			
MULTIPLE LISTEE 1 MODELS		BASIC LISTEE MODELS	
Additional Model Details (Optional)	Model Name and Number	Identifying Information	

9.0 Correlation Page For Multiple Listings

MULTIPLE LISTEE 2	None		
Address			
Country		EPA ID	
Contact			
Phone			
FAX			
Email			
Brand Name			
Date Available		Market Availability	OEM
Major Markets			
Trans Type			
Notes			
UPC			
Reason no UPC			
Other reason no UPC			
ASSOCIATED MANUFACTURER			
Address			
Country			
MULTIPLE LISTEE 2 MODELS		BASIC LISTEE MODELS	
Additional Model Details (Optional)	Model Name and Number	Identifying Information	

10.0 General Information

The Applicant has agreed to produce products in accordance with the requirements of this report and to maintain compliance with all ENERGY STAR Product Specification requirements.

Changes to Product Design / Alternate Components

As part of this agreement, the Applicant also has agreed to notify Intertek and to request authorization prior to making any changes to the product (including but not limited to using alternate parts, components or materials) which may effect compliance with the ENERGY STAR Product Specification. Those parts, components or materials identified as critical have been listed in Section 4.0 of this report.

Product Surveillance

Under this Program, market surveillance is conducted on an annual basis. For each Product Type defined in the EPA ENERGY STAR Program, Intertek will select 10% of those certified products for Verification Testing in accordance with the requirements of the EPA ENERGY STAR Product Specification.

The primary source for products under Verification Testing will be the retail market. Applicants whose products are selected for Verification Testing are required to provide a list of locations where the product might be obtained. The Applicant is responsible for the cost of procurement and the Verification Tests. Should products not be readily available on the retail market, the Applicant is required to provide access to distribution warehouses to allow selection of those products. Should the product not be available on the retail market or if procurement from the retail market is not feasible, then alternate arrangements for Verification Testing will be made by the Intertek Certification Body.

As a general rule under the Verification Testing requirements, the products must achieve energy values within 5% of the required Tier Limit.

Compliance with ENERGY STAR Product Specifications under Verification Testing

Products found non-compliant with ENERGY STAR Product Specification under Verification Testing, will be reported to the EPA within 48 hours and the product removed from the ENERGY STAR Program. If it is determined during Verification Testing that changes have been made to product design or critical components, the Certification Body may increase Verification Testing frequency of those products.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

Note to Intertek Follow Up Inspector: The Component Evaluation Center, CEC, will notify you in writing when these components must be selected and sent to the CEC for re-evaluation

Ship the samples to:
Intertek Testing Services Shanghai Limited
ETL Component Evaluation Center
Building No. 86, 1198 Qinzhou Road (North)
Shanghai 200233, China
Attn: Ms. Angela Han

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

11.0 Manufacturing and Production Tests

Manufacturing and Production tests are not required under the INTERTEK ENERGY STAR Program. However, Intertek encourages the use of such ongoing product testing to ensure compliance with the EPA ENERGY STAR Product Specifications.

